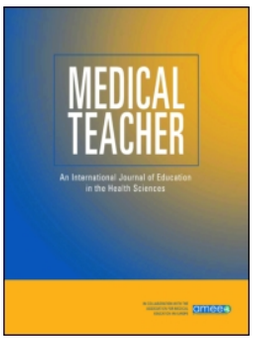
Student participation in the design of learning and teaching



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SHORT COMMUNICATION

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Student participation in the design of learning and teaching: Disentangling the terminology and approaches

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ABSTRACT

Background: Students are ever more involved in the design of educational practices, which is reflected in the growing body of literature about approaches to student participation. Similarities and differences between these approaches often remain vague since the terms are used interchangeably. This confusing and fragmented body of literature hampers our understanding the process and outcomes of student participation and choosing the most suitable approach for it.

Method: We identified the three most frequently used terms related to the design of learning and teaching – design-based research (DBR), participatory design (PD), and co-creation – and disentangled the terminology by focusing on relevant definitions, aims, involvement of students, outcomes, and related terminology.

Results: Differences between the approaches to student participation can be found in the degree to which students are the central actors and the degree to which the design is informed by educational theory.

Conclusion: It is important to align the level of student participation with the purpose of the approach.

Introduction

Students are ever more involved in the design of educational practices (e.g. Bovill et al. 2016), which is reflected in the growing body of educational literature about approaches to student participation: design-based research (DBR), participatory design (PD), co-creation, co-design, student voice, student–staff partnership, students as change agents, student engagement, and student empowerment (Seale 2009; Anderson and Shattuck 2012; Bovill et al. 2016). Peters et al. (2018) recently stressed the different understandings of student engagement in medical education. Yet, despite these different understandings, the ASPIRE to Excellence award initiative was launched by the International Association for Medical Education in Europe (AMEE) for recognition of international excellence in medical, dental and veterinary schools for student engagement in the curriculum (ASPIRE Initiative 2012). Similarities and differences between the different approaches of involving students in the design of educational practices have remained vague and terminology is confusing. Several conceptual models on student participation in the educational design process are used. Druin (2002) described different students' roles in the design process, and Bovill and Bulley (2011) developed a "Ladder of student participation in curriculum design" (p. 5), showing eight rungs on a continuum of student participation. Although these models are helpful in practice, they do not take away the entanglement of terminology of approaches used in the field. The fragmentation of the literature hampers our understanding of the processes and outcomes of student participation as well as choosing the most suitable approach for it. We recognize the overlapping nature of many definitions, but we aimed to disentangle the terminology of different approaches to student participation in educational design and to situate this terminology in existing models on student participation.

Methods

We explored the frequency of use of different terms related to student participation in the design of learning and teaching by determining the amount of hits from any year and within the general field of education in Web of Science. Search terms were: DBR, PD, co-creation, co-design, student voice, student-staff partnership, student-faculty partnership, students as partners, students as change agents, student engagement, student empowerment, student participation, student-staff collaboration, and student-faculty collaboration, in combination with the search term education. All types of articles were included. The purpose of this search was to provide a rough estimate of the prevalence of each term in the general educational literature.

We identified the most frequently used terms that related to student participation in educational design: DBR, PD, student voice, and co-creation. While reading the articles, we noticed that the term student voice is often used differently in a more passive and active way, in the context of what we consider respectively PD and co-creation. Therefore we decided not to use student voice as a term by itself, but to highlight where student voice relates to both PD and co-creation. We then searched for

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relevant definitions, aims, involvement of stakeholders, outcomes and benefits, and related terminology for each of the terms. Based upon key literature on DBR, PD, and co-creation, most commonly related terms for each concept were included.

Results

Design-based research

DBR is a collaboration of researchers and educational practitioners whereby they develop answers to educational problems and advance theoretical understanding. The design of the learning environment is informed by educational theories. The aim of DBR is to improve both the design of the learning environment and to develop and refine educational theories (Anderson and Shattuck 2012; Dolmans and Tigelaar 2012). Apart from researchers and educational practitioners, other stakeholders can be involved in an iterative design process such as students and educational designers. Students' role is often limited to provide input; they are not put forward as central actors within the design process (McKenney and Reeves 2012). Benefits of DBR are improving educational practice and theory by testing and refining educational design guidelines about what might work under which conditions and why. Terms that are often used in relation to DBR are development research and design experiments (e.g. Anderson and Shattuck 2012).

Participatory design

PD is a collaboration of all stakeholders, including students, whereby they design and develop innovations that are tailored to the learners and context (Cober et al. 2015; Könings and McKenney 2017; Könings et al. 2017). The goal of PD is to improve quality of educational innovations by ensuring use, usability and utility of educational design for both teachers and students (Di Salvo et al. 2017). Starting from the idea that all stakeholders' knowledge and expertise is highly valued, teachers, educational designers, and students collaborate (Seale 2009). Benefits of PD exists for teachers and students in their own local practice: the implementation of new tailor-made educational designs (Cober et al. 2015). Terms that are intertwined are co-design, collaborative design, student voice and student participation (when only listening to students), and student engagement (e.g. Cober et al. 2015).

Co-creation

Co-creation is a close collaboration of students and teachers. The aim is to intensify active engagement of students in the educational (design) process and to improve teaching and learning by welcoming students' perspectives (Bovill et al. 2016). This goes beyond only listening to student voices. The focus within co-creation is on empowering students to actively collaborate with teachers (Bovill et al. 2011). Within co-creation, students' roles range from being involved with limited influence on decision-making to working in a partnership with teachers (Delpish et al. 2010). Partnership is characterized by a focus on equality between students and staff (Cook-Sather et al. 2014). Benefits for staff, students, and institutions include enhanced satisfaction and engagement, motivation and learning, meta-cognitive skills, improved quality of student–teacher interactions, and development of graduate competencies such as leadership skills (Cook-Sather et al. 2014). Related terms are student–staff partnership, student voice (when actively involved), active student participation, students as partners/change agents, and student empowerment (e.g. Seale 2009).

Application to models

Linking the different approaches to the existing models on student participation makes clear they include all three approaches (see Figure 1). The model of Druin (2002) describes four roles: students as users, testers, informants and design partners. In DBR students are generally users and to some extent testers, being included in the analysis and evaluation phase and less in the design phase, whereas in PD, students are more usually testers and informants who participate in the design and development of tailor-made innovations. In co-creation, involvement of students can go up to being equal stakeholders in the design process. Applying the approaches to the "ladder of student participation" of Bovill and Bulley (2011), DBR can be placed on the ladder of participation at the two bottom rungs, where students evaluate rather than having control

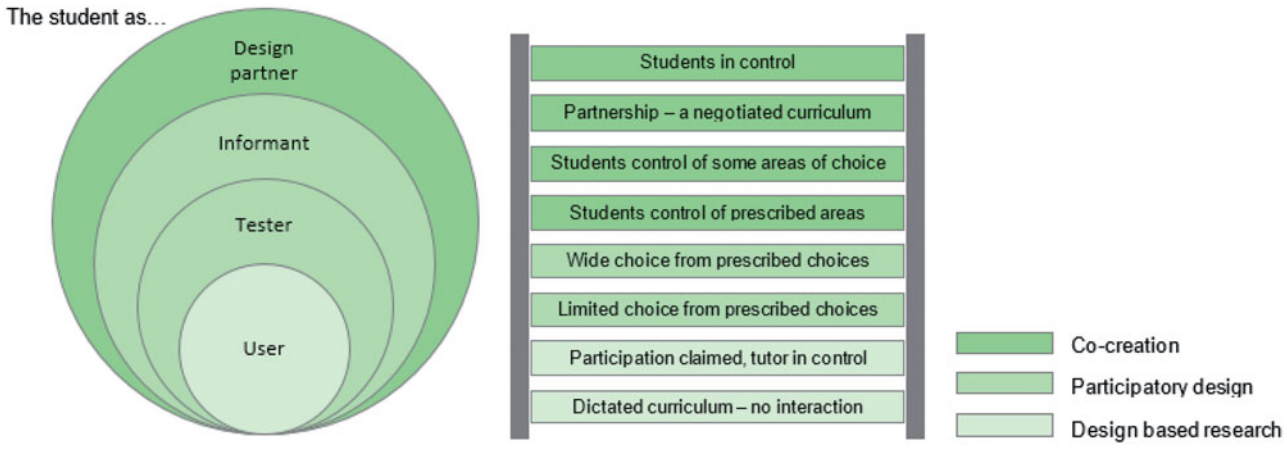

Figure 1. Indication of the links between the three approaches DBR, PD and co-creation, and existing models on different roles of students in education design. Adapted from the onion-model by Druin (2002) and the ladder of student participation by Bovill and Bulley (2011).

of their curriculum. PD is situated at the following two rungs, providing students with some choice. Finally, co-creation refers to the upper end of the ladder, as student participation is on its highest level with students having more influence on decision-making.

Discussion and conclusions

There is clearly much overlap between these terms. The similarity between DBR, PD and co-creation is in valuing the input of students as stakeholders in the educational design process. However, in trying to differentiate terms, key differences lie in the level of student participation in the design process and the focus on educational theory. Students being the central actors increase from DBR to co-creation, while the focus on educational theory decreases. It is therefore important that the level of student participation is aligned with the purpose of the approach.

Implications

Attempting to disentangle terminology helps in preventing interchangeable usage of terms and contributes to deeper understanding of the processes and outcomes of student participation in the design of learning and teaching. With the demarcation of approaches, we invite researchers and practitioners to clearly define their approach while studying processes and outcomes of student participation. If answers to educational problems have to be developed and the aim is to advance theoretical understanding beyond local relevance only, DBR may be the best approach and students are mainly involved in evaluation. In contrast, in PD, stakeholders including students design and develop local innovations that are tailor-made educational designs. Co-creation is a more suitable approach if the aim is to improve active student engagement, student experience and effectiveness of the learning environment. Practically, disentangling the approaches enables teachers and medical schools to make more conscious decisions on which approach for student participation to choose, aligned with the aims pursued in the design process of learning and teaching.

Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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References

Anderson T, Shattuck J. 2012. Design-based research: a decade of progress in education research? Educ Res. 41:16–25.

ASPIRE Initiative: International Association for Medical Education in Europe. 2012. [accessed 2019 Apr 15]. https://www.aspire-to-excellence.org/.

Bovill C, Bulley C. 2011. A model of active student participation in curriculum design-exploring desirability and possibility. In: Rust C, editor. Improving student learning (18) global theories and local practices: institutional, disciplinary and cultural variations. Oxford: The Oxford Centre for Staff and Educational Development; p. 176–188.

Bovill C, Cook-Sather A, Felten P. 2011. Students as co-creators of teaching approaches, course design, and curricula: implications for academic developers. Int J Acad Dev. 16:133–145.

Bovill C, Cook-Sather A, Felten P, Millard L, Moore-Cherry N. 2016. Addressing potential challenges in co-creating learning and teaching: overcoming resistance, navigating institutional norms and ensuring inclusivity in student–staff partnerships. High Educ. 71:195–208.

Cober R, Tan E, Slotta J, So HJ, Könings KD. 2015. Teachers as participatory designers: two case studies with technology-enhanced learning environments. Instr Sci. 43:203–228.

Cook-Sather A, Bovill C, Felten P. 2014. Engaging students as partners in learning and teaching: a guide for faculty. San Francisco (CA): Jossey-Bass.

Delpish A, Darby A, Holmes A, Knight-McKenna M, Mihans R, King C, Felten P. 2010. Equalizing voices: student–faculty partnership in course design. In: Werder C, Otis M, editors. Engaging student voices: in the study of teaching and learning. Sterling (VA): Stylus Publishing; p. 96–114.

Di Salvo B, Yip J, Bonsignore E, Di Salvo C. 2017. Participatory design for learning. New York (NY): Routledge.

Dolmans HJM, Tigelaar D. 2012. Building bridges between theory and practice in medical education using a design-based research approach: AMEE Guide No. 60.

Druin A. 2002. The role of children in the design of new technology. Behav Inform Technol. 21:1–24.

Könings KD, Bovill C, Woolner P. 2017. Towards an interdisciplinary model of practice for participatory building design in education. Eur J Educ. 52:306–3017.

Könings KD, McKenney S. 2017. Participatory design of (built) learning environments. Eur J Educ. 52:247–252.

McKenney S, Reeves TC. 2012. Conducting educational design research. Abingdon: Routledge.

Peters H, Zdravkovic M, Costa MJ, Celenza A, Ghias K, Klamen D, Mossop L, Rieder M, Nadarajah VD, Wangsaturaka D, et al. 2018. Twelve tips for enhancing student engagement. Med Teach. DOI: 10.1080/0142159X.2018.1459530

Seale J. 2009. Doing student voice work in higher education: an exploration of the value of participatory methods. Br Educ Res J. 36:995–1015.